

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method for communicating in a wireless multi-hop system having at least one base station, at least one relay station, and user equipment, the method comprising:

facilitating, at a first relay station, a communication between user equipment and the first relay station using a second radio interface; and

multiplexing the communication between the first relay station and a base station and between the first relay station and a second relay station using a first radio interface to create a plurality of simultaneous data streams; and

processing the communication between the first relay station and the base station with the first radio interface separately from the communication between the user equipment and the first relay station.

2. (Previously presented) The method of claim 1, further comprising communicating the communication between the second relay station and the base station.

3. (Previously presented) The method of claim 2, wherein the second relay station communicates directly with the base station.

4. (Canceled)

5. (Previously presented) The method of claim 1, further comprising dynamically reusing communication resources between the user equipment and the first and second relay stations.

6. (Previously presented) The method of claim 1, wherein communicating between user equipment and the first relay station comprises communicating a relay station specific pilot signal.

7. (Original) The method of claim 1, wherein the second radio interface comprises multiple input multiple output transmissions.

8. (Original) The method of claim 1, wherein the first radio interface and the second radio interface operate using a common frequency bandwidth.

9. (Previously presented) The method of claim 1, wherein the first radio interface comprises a macroscopic multiplexing.

10. (Original) The method of claim 1, further comprising sharing resources between communication using the first radio interface and communication using the second radio interface, wherein the first radio interface and the second radio interface operate using different categories of communication links.

11. (Previously presented) The method of claim 10, wherein the different categories of communication links are selected from multi-carrier modulation, spread-spectrum transmission, frequency division duplexing, and time division duplexing.

12. (Previously presented) A wireless communication system having a base station and a relay station that communicate with user equipment, the system comprising:

a base station having a first radio transceiver and being connected to a core network;
and

a first relay station having a second radio transceiver and being configured to simultaneously communicate with the base station and with a second relay station using a first radio interface and being configured to communicate with user equipment having a third radio transceiver using a second radio interface, wherein the operation of the first radio interface and the second radio interface are separate from each other.

13. (Original) The system of claim 12, wherein the operation of the first radio interface and the second radio interface includes, at least in part, using the same frequency bandwidth.

14. (Previously presented) The system of claim 12, further comprising the second relay station configured to communicate with the base station.

15. - 24(Canceled)